

FORM PTO-1390 (Modified)
(REV 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES

213512US0XPCT

DESIGNATED/ELECTED OFFICE (DO/EO/US)

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

CONCERNING A FILING UNDER 35 U.S.C. 371

09/ 926132

INTERNATIONAL APPLICATION NO.

INTERNATIONAL FILING DATE

PRIORITY DATE CLAIMED

PCT/FR00/00665

17 M arch 2000

19 March 1999

TITLE OF INVENTION

PROCESS FOR MANUFACTURING A SILICONE PART INTENDED TO BE ADHESIVELY BONDED AND
SELF-ADHESIVE ASSEMBLY MANUFACTURED ACCORDING TO THE PROCESS

APPLICANT(S) FOR DO/EO/US

CHEVALLIER Yves et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☒ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☒ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

Items 13 to 20 below concern document(s) or information included:

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☐ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☐ Certificate of Mailing by Express Mail
23. ☒ Other items or information:

Notice for Consideration of Documents Cited in International Search Report/Notice of Priority
 PCT/IB/304/Drawings (1 Sheet)/PCT/IB/308/Amended Sheets (Pages 8 and 9)/List of Related Cases
 Cited Pending Applications (2)

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR 1.53) 09/926132		INTERNATIONAL APPLICATION NO. PCT/FR00/00665		ATTORNEY'S DOCKET NUMBER 213512US0XPCT	
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24. The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) : <input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1000.00 <input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$860.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 <div style="text-align: right;">ENTER APPROPRIATE BASIC FEE AMOUNT =</div>				CALCULATIONS PTO USE ONLY	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				\$0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	3 - 20 =	0	x \$18.00	\$0.00	
Independent claims	1 - 3 =	0	x \$80.00	\$0.00	
Multiple Dependent Claims (check if applicable). <input type="checkbox"/>				\$0.00	
TOTAL OF ABOVE CALCULATIONS =				\$860.00	
<input type="checkbox"/> Applicant claims small entity status. (See 37 CFR 1.27). The fees indicated above are reduced by 1/2.				\$0.00	
SUBTOTAL =				\$860.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).				\$0.00	
TOTAL NATIONAL FEE =				\$860.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). <input type="checkbox"/>				\$0.00	
TOTAL FEES ENCLOSED =				\$860.00	
				Amount to be:	\$
				refunded	
				charged	\$

a. ☒ A check in the amount of **\$860.00** to cover the above fees is enclosed.


b. ☐ Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. **15-0030**. A duplicate copy of this sheet is enclosed.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

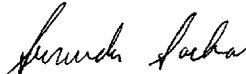
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:



22850

Surinder Sachar
Registration No. 34,423


 SIGNATURE
Norman F. Oblon
 NAME
24,618
 REGISTRATION NUMBER
Sept. 7 2001
 DATE

1/ptk

**Process for manufacturing a silicone part intended to
be adhesively bonded and self-adhesive assembly
manufactured according to the process**

5 The invention relates to any molded part, made of
silicone, intended to be mounted by adhesive bonding on
a substrate, for example in order to constitute a seal.

10 It is known that silicone parts can be adhesively
bonded only with a silicone-based adhesive, the latter
adhering to the silicone part only if it cures after
having been brought into contact with the part.

15 It is known practise to use silicone molded parts as
seals, blocking joints, dampers, stops, etc.

20 It is known practise either to premold the part and
then bond it to its substrate or to overmold the part
directly onto its substrate.

25 In the case of premolding the part followed by adhesive
bonding, a layer of silicone adhesive is deposited on
the substrate at that point where the silicone molded
part must be placed, the molded part is then positioned
and time must elapse for the adhesive to cure. This
bonding process has several drawbacks: the cure time of
the adhesive is long; a specific tool for positioning
the part is required and this tool is tied up while the
curing takes place; and there is the difficulty of
30 having an adhesive layer which is uniform in thickness
and does not spill over.

35 In the case of overmolding, a thin silicone adhesive
layer, or more precisely an adhesion primer, is
deposited on the substrate at the point where the
silicone molded part must be located. This layer is
then left to dry for a time varying from about a
quarter of an hour to about three quarters of an hour,
depending on its composition and the ambient

temperature. A mold whose hollow cavity corresponds to the silicone part covers the adhesive-coated portion and silicone resin is injected into the mold. After the resin has cured, the mold is removed. This bonding
5 process also has drawbacks: time must be allowed for the adhesion primer layer to dry; and an even longer time must be allowed for the curing to take place, during which time the tied-up mold cannot be used elsewhere; and this is a mold which is often complex
10 and expensive.

It is an object of the present invention to avoid, or at the very least to reduce, these drawbacks by providing a manufacturing process which results in a
15 self-adhesive assembly.

The invention relates to a process for manufacturing a silicone molded part intended to be fastened to another part by adhesive bonding, said silicone part being, at
20 the end of the process, in the form of a self-adhesive assembly, characterized in that it comprises at least the following steps:

* using a mold having a hollow cavity, the dimensions of which are approximately equal to those of
25 the self-adhesive assembly;

* using adhesive bonding means consisting of a stack comprising, in succession, at least a protective sheet, a layer of a first adhesive, an intermediate sheet and a layer of a second adhesive, said second adhesive
30 being silicone-based;

* placing said adhesion means in said mold, the protective sheet being in contact with one of the walls of the hollow cavity;

* injecting a silicone resin into the space left
35 free inside the mold by said adhesion means; and

* curing the self-adhesive assembly, formed from the adhesion means and the silicone resin, and then demolding it.

The invention also relates to a self-adhesive assembly comprising at least one part intended to be fastened to another part and double-sided adhesive bonding means made from a stack comprising, in succession, a protective sheet, a layer of a first adhesive, an intermediate sheet and a layer of a second adhesive in contact with the part to be bonded, characterized in that the part to be adhesively bonded is a silicone part and in that the second adhesive is silicone-based.

The invention will be more clearly understood and further features will become apparent from the following description and from figure 1, appended hereto, which shows, seen in cross section, means used in the process.

To allow a silicone part to be rapidly bonded to another part without tying for a long period the positioning equipment used during industrial-scale manufacture, it is proposed below to produce self-adhesive assemblies in which the silicone part is combined with a double-sided self-adhesive strip during its molding.

Since molding techniques are assumed to be known to the reader, certain details such as the resin injection into a mold or the retention of a sheet against the internal wall of a mold by suction, will be mentioned without going into the implementation details.

The silicone parts produced according to the process may either be parts molded directly to the desired dimensions or sheets designed to be cut subsequently to the desired dimensions.

Figure 1 shows, in cross-sectional view, a self-adhesive assembly and a mold M used to manufacture the self-adhesive assembly.

The mold M is formed from two half-shells M1, M2 which, when they are joined together, as shown in the figure, constitute a cavity with, on the inside, a space bounded by "the hollow cavity" (E_1 , E_2) of the mold. The dimensions of the hollow cavity correspond approximately to the dimensions of the self-adhesive assembly to be obtained.

The self-adhesive assembly, as shown in the figure, consists of a stack comprising, in succession, a protective sheet Fp, a layer Ce of a first adhesive, an intermediate sheet Fi, a layer Cs of a second adhesive and the part R made of silicone resin.

The manufacturing process consists, after having produced the mold M, in obtaining the double-sided adhesive, Ce + Fi + Cs, with its protective sheet Fp. The adhesive of the layer Cs is a substance compatible with silicone, that is to say a silicone-based adhesive. The substances used in the process are chosen to be compatible with the mechanical, thermal, chemical and other properties of the desired self-adhesive assembly. The illustrative example serving for the present description will be commented upon in greater detail below.

During one step of the process, the double-sided adhesive (Ce + Fi + Cs) is placed in the half-mold M1 with the protective sheet Fp in contact with the bottom F1 of the cavity E_1 . The dimensions of the cavity E_1 of the half-shell M1 correspond approximately to the dimensions of the assembly consisting of the double-sided adhesive and the protective sheet Fp. That side of the layer Cs furthest away from the bottom F1 is approximately flush with that face of the half-shell M1 which is contact with the half-shell M2.

The half-shell M1 is drilled with several suction ducts (not shown in the figure). These are, as is

conventional in the art of molding, very fine holes which pass through the half-shell M1 and emerge in the bottom F1 of the hollow cavity E₁ where the protective sheet Fp lies. These holes make it possible, by suction
5 using a pump (not shown), to keep the double-sided adhesive and the protective sheet in place.

When the double-sided adhesive Ce + Fi + Cs is in place, the half-shell M2 is brought against the half-
10 shell M1 with their hollow cavities (E₁, E₂ respectively) facing each other, as shown in the drawing. The two half-shells are kept in position by fastening means (not shown) known to those skilled in the art.

15 The half-shell M2 is drilled with several injection holes (not shown in the figure). These are, here again as is conventional in the art of molding, a number of holes, some of which are used to inject the material to
20 be molded, in this case silicone resin, and the rest of which are used to allow the air contained in the hollow cavity to escape as it becomes progressively filled with the material to be molded.

25 During a subsequent step, the mold is filled with resin, the assembly is subjected to a curing step and, once the resin has cured, the self-adhesive assembly, comprising the double-sided adhesive, the protective sheet and the silicone resin part, is demolded. This
30 self-adhesive assembly is either ready to be used or ready to be cut to the desired dimensions. To do this, all that is required is to remove the protective sheet Fp in order to be able to position it without any complex tooling and without a waiting time during
35 manufacture, given that the self-adhesive assembly is "ready to stick", unlike, as mentioned previously, silicone parts whose adhesive bonding means are joined to the part only at the moment of bonding.

In the example described, as shown in the figure, the width l_1 of the hollow cavity E_1 of the half-shell M_1 is greater than the width l_2 of the hollow cavity E_2 of half-shell M_2 ; this makes it possible, in addition to
5 holding the double-sided adhesive in place by suction, to hold it in place by jamming along its edges.

Again in the case of the example described, the mold M is made of aluminum, a material compatible with
10 silicone, that is to say a material for which there is no problem of any chemical reaction, particularly while the silicone resin is curing. Choosing a compatible material is a manufacturing precaution well known to those skilled in the art of manufacturing molded
15 silicone parts.

The transverse dimensions of the half-molds M_1 and M_2 , namely the width l_M and its height H_M are 15 cm by 3 cm, respectively.
20

The protective sheet F_p and the layer of a first adhesive C_e consist of an adhesive film produced and sold by 3M under the reference VHB 9460; this is an adhesive of constant thickness backed by a protective
25 sheet made of siliconized paper.

The intermediate sheet F_i and the layer of a second adhesive C_s consist of an adhesive film produced by Protectia under the reference KAPTON 830; this is a
30 KAPTON film coated on one side with a silicone-based adhesive bonding element. It should be noted that the VHB 9460 film is not silicone-based but, as evident from the above, only the layer C_s needs to be made of a silicone-based adhesive, it being understood that the
35 adhesive of the layer C_e needs to adhere to the sheet F_i .

The present invention is not limited to the foregoing; it is possible for the double-sided adhesive to be held

in place in the mold by, for example, lightly bonding it instead of holding it in place by suction.

- 5 Likewise, the transverse dimensions of the cavities of the half-shells M1, M2 may be the same along the parting line of these half-shells, or indeed that of the half-shell M2 may be greater than that of the half-shell M1.
- 10 With regard to the parting lines between M1 and M2 on the one hand and between R and Cs on the other hand, these may be at different levels; thus, for example, the half-shell M1 may be a simple plate and the assembly R + Cs + Fi + Ce + Fp is then entirely housed
- 15 in the cavity of the half-shell M2, the dimensions and the geometry of which are chosen accordingly.

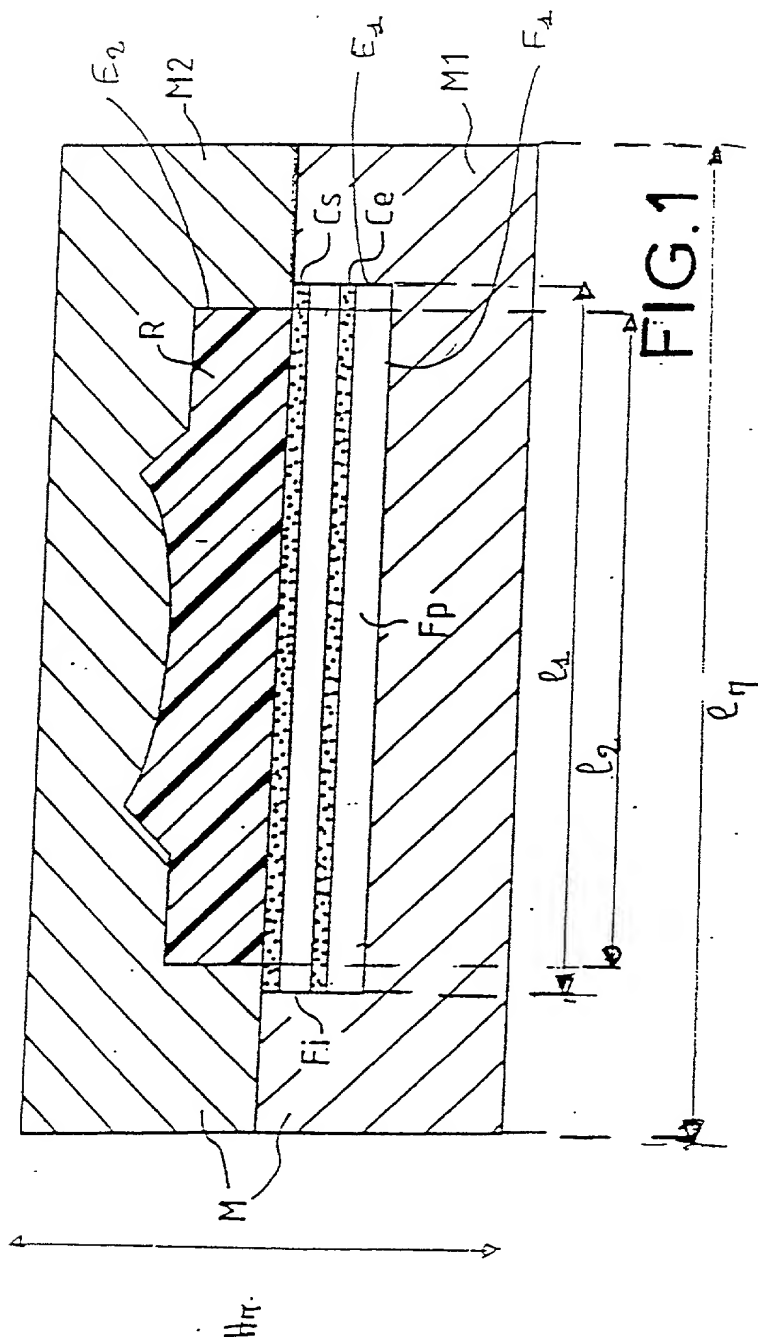
- With regard to the various constituents, these will, of course, have to be chosen according to the part to be
- 20 produced and according to the conditions under which this part is stored and used.

CLAIMS

1. A process for manufacturing a silicone part intended to be fastened to another part by adhesive bonding, said silicone part being, at the end of the process, in the form of a self-adhesive assembly, characterized in that it comprises at least the following steps:
 - * using a mold (M) having a hollow cavity (E_1 , E_2), the dimensions of which are approximately equal to those of the self-adhesive assembly;
 - * using adhesive bonding means consisting of a stack comprising, in succession, at least a protective sheet (Fp), a layer (Ce) of a first adhesive, an intermediate sheet (Fi) and a layer (Cs) of a second adhesive, said second adhesive being silicone-based;
 - * placing said adhesion means in said mold (M), the protective sheet (Fp) being in contact with one of the walls of the hollow cavity (E_1);
 - * injecting a silicone resin (R) into the space left free inside the mold by said adhesion means; and
 - * curing the self-adhesive assembly, formed from the adhesion means and the silicone resin, and then demolding it.
2. The process as claimed in claim 1, characterized in that it includes the use of two adhesives of different types for the first layer (Ce) and for the second layer (Cs), the adhesive of the second layer being silicone-based.
3. The process as claimed in claim 1, characterized in that it includes the choice of two films each consisting of a sheet coated with adhesive on one

of its sides, one of the two films being used to constitute the protective sheet (Fp) and the layer (Ce) of a first adhesive and the other film being used to constitute the intermediate sheet (Fi) and the layer (Cs) of a second adhesive.

FIG. 1



Declaration and Power of Attorney for Patent Application

Déclaration et Pouvoirs pour Demande de Brevet

French Language Declaration

En tant l'inventeur nommé ci-après, je déclare par le présent acte que:

As a below named inventor, I hereby declare that:

Mon domicile, mon adresse postale et ma nationalité sont ceux figurant ci-dessous à côté de mon nom.

My residence, post office address and citizenship are as stated next to my name

Je crois être le premier inventeur original et unique (si un seul nom est mentionné ci-dessous), ou l'un des premiers co-inventeurs originaux (si plusieurs noms sont mentionnés ci-dessous) de l'objet revendiqué, pour lequel une demande de brevet a été déposée concernant l'invention intitulée

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

PROCESS FOR MANUFACTURING A SILICONE PART INTENDED TO BE

ADHESIVELY BONDED AND SELF-ADHESIVE ASSEMBLY MANUFACTURED

ACCORDING TO THE PROCESS

et dont la description est fournie ci-joint à moins

the specification of which:

☐ ci-joint

☐ is attached hereto.

☐ a été déposée le _____

☒ was filed on 17 March 2000

sous le numéro de demande des Etats-Unis ou le numéro de demande international PCT

as United States Application Number or PCT International Application Number

_____ et modifiée le

PCT/ER00/00665 and was amended on

_____ (le cas échéant).

_____ (if applicable).

Je déclare par le présent acte avoir passé en revue et compris le contenu de la description ci-dessus, revendications comprises, telles que modifiées par toute modification dont il aura été fait référence ci-dessus.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

Je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code fédéral des réglementations

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

French Language Declaration

Je revendique par le présent acte avoir la priorité étrangère, en vertu du Titre 35, § 119(a)-(d) ou § 365(b) du Code des Etats-Unis, sur toute demande étrangère de brevet ou certificat d'inventeur ou, en vertu du Titre 35, § 365(a) du même Code, sur toute demande internationale PCT désignant au moins un pays autre que les Etats-Unis et figurant ci-dessous et, en cochant la case, j'ai aussi indiqué ci-dessous toute demande étrangère de brevet, tout certificat d'inventeur ou toute demande internationale PCT ayant une date de dépôt précédant celle de la demande à propos de laquelle une priorité est revendiquée.

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)
Demande(s) de brevet antérieure(s) dans un autre pays.

Priority claimed
Droit de priorité
revendiqué

99 03466 FRANCE
(Number) (Country)
(Numéro) (Pays)

19 MARCH 1999
(Day/Month/Year Filed)
(Jour/Mois/Année de dépôt)

☒ ☐
Yes No
Oui Non

(Number) (Country)
(Numéro) (Pays)

(Day/Month/Year Filed)
(Jour/Mois/Année de dépôt)

☐ ☐
Yes No
Oui Non

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 119(e) du Code des Etats-Unis, de toute demande de brevet provisoire effectuée aux Etats-Unis et figurant ci-dessous

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 120 du Code des Etats-Unis, de toute demande de brevet effectuée aux Etats-Unis, ou en vertu du Titre 35, § 365(c) du même Code, de toute demande internationale PCT désignant les Etats-Unis et figurant ci-dessous et, dans la mesure où l'objet de chacune des revendications de cette demande de brevet n'est pas divulgué dans la demande antérieure américaine ou internationale PCT, en vertu des dispositions du premier paragraphe du Titre 35, § 112 du Code des Etats-Unis, je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code fédéral des réglementations, dont j'ai pu disposer entre la date de dépôt de la demande antérieure et la date de dépôt de la demande nationale ou internationale PCT de la présente demande.

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application

PCT/FR00/00665

17 MARCH 2000

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

(Status) (patented, pending, abandoned)
(Statut) (breveté, en cours d'examen, abandonné)

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

(Status) (patented, pending, abandoned)
(Statut) (breveté, en cours d'examen, abandonné)

Je déclare par le présent acte que toute déclaration ci-incluse est, à ma connaissance, véridique et que toute déclaration formulée à partir de renseignements ou de suppositions est tenue pour véridique; et de plus, que toutes ces déclarations ont été formulées en sachant que toute fausse déclaration volontaire ou son équivalent est passible d'une amende ou d'une incarcération, ou des deux, en vertu de la Section 1001 du Titre 18 du Code des Etats-Unis, et que de telles déclarations volontairement fausses risquent de compromettre la validité de la demande de brevet ou du brevet délivré à partir de celle-ci.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

French Language Declaration

POUVOIRS: En tant que l'inventeur cité, je désigne par la présente l'(les) avocat(s) et/ou agent(s) suivant(s) pour qu'ils poursuive(nt) la procédure de cette demande de brevet et traite(nt) toute affaire s'y rapportant avec l'Office des brevets et des marques. (mentionner le nom et le numéro d'enregistrement).

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (list name and registration number)

Norman F. Oblon, Reg. No. 24,618; Marvin J. Spivak, Reg. No. 24,913; C. Irvin McClelland, Reg. No. 21,124; Gregory J. Maier, Reg. No. 25,599; Arthur I. Neustadt, Reg. No. 24,854; Richard D. Kelly, Reg. No. 27,757; James D. Hamilton, Reg. No. 28,421; Eckhard H. Kuesters, Reg. No. 28,870; Robert T. Pous, Reg. No. 29,099; Charles L. Gholz, Reg. No. 26,395; Vincent J. Sunderdick, Reg. No. 29,004; William E. Beaumont, Reg. No. 30,996; Robert F. Gnuse, Reg. No. 27,295; Jean-Paul Lavalleye, Reg. No. 31,451; Stephen G. Baxter, Reg. No. 32,884; Martin M. Zoltick, Reg. No. 35,745; Robert W. Hahl, Reg. No. 33,893; Richard L. Treanor, Reg. No. 36,379; Steven P. Weihrouch, Reg. No. 32,829; John T. Goodkasian, Reg. No. 26,142; Richard L. Chinn, Reg. No. 34,305; Steven E. Lipman, Reg. No. 30,011; Carl E. Schlier, Reg. No. 34,426; James J. Kulbaski, Reg. No. 34,648; Richard A. Neifeld, Reg. No. 35,299; J. Derek Mason, Reg. No. 35,270; Surinder Sachar, Reg. No. 34,423; Christina M. Gadiano, Reg. No. 37,628; Jeffrey B. McIntyre, Reg. No. 36,867; and Paul E. Rauch, Reg. No. 38,591 with full powers of substitution and revocation.

Addresser toute correspondance à

Send Correspondence to:

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Addresser tout appel téléphonique à:
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Direct Telephone calls to: (name and telephone number)

(703) 413-3000

Nom complete de l'unique ou premier inventeur		Full name of sole or first inventor	
Yves CHEVALLIER		August 21, 2001	
Signature de l'inventeur	Date	Inventor's signature	Date
Yves CHEVALLIER			
Domicile		Residence	
33127 MARTIGNAS		FRANCE	
Nationalité		Citizenship	
French		FRX	
Adresse Postale		Post Office Address	
8, allée de Lussac			
33127 MARTIGNAS		FRANCE	
Nom complete du second co-inventeur, le cas echeant		Full name of second joint inventor, if any	
Christophe VENENCIE		August 21, 2001	
Signature de l'inventeur	Date	Second inventor's signature	Date
Christophe VENENCIE			
Domicile		Residence	
33290 LE PIAN MEDOC		FRANCE	
Nationalité		Citizenship	
French		FRX	
Adresse Postale		Post Office Address	
1277 rue J.J. Rousseau			
33290 LE PIAN MEDOC		FRANCE	

(Fournier les mêmes renseignements et la signature de tout co-inventeur supplémentaire)

(Supply similar information and signature for third and subsequent joint inventors.)

French Language Declaration

Nom complet du troisième co-inventeur, le cas échéant	Full name of third joint inventor, if any Christophe LABILLE August 21, 2001
Signature de l'inventeur Date	Third Inventor's signature Date <i>Christophe LABILLE</i>
Domicile	Residence 33320 LE TAILLAN MEDOC FRANCE
Nationalité	Citizenship French
Adresse Postale	Post Office Address 7, avenue des Mésanges
	33320 LE TAILLAN MEDOC FRANCE

Nom complet du quatrième co-inventeur, le cas échéant	Full name of fourth joint inventor, if any
Signature de l'inventeur Date	Fourth Inventor's signature Date
Domicile	Residence
Nationalité	Citizenship
Adresse Postale	Post Office Address

Nom complet du cinquième co-inventeur, le cas échéant	Full name of fifth joint inventor, if any
Signature de l'inventeur Date	Fifth Inventor's signature Date
Domicile	Residence
Nationalité	Citizenship
Adresse Postale	Post Office Address

Nom complet du sixième co-inventeur, le cas échéant	Full name of sixth joint inventor, if any
Signature de l'inventeur Date	Sixth Inventor's signature Date
Domicile	Residence
Nationalité	Citizenship
Adresse Postale	Post Office Address

(Fournir les mêmes renseignements et la signature de tout co-inventeur supplémentaire.)

(Supply similar information and signature for third and subsequent joint inventors.)